

TWO NEW SPECIES OF AUSTRALIAN CULICIDAE (DIPTERA).

By FRANK H. TAYLOR,

The Australian Institute of Tropical Medicine.

The present paper contains the descriptions of two new species of mosquitos from North Queensland, *Mucidus chrysogaster* and *Aedes (Finlaya) mackerrasi*. The former, the second Australian species of the genus, is a very interesting and most beautiful insect, of which only the female is so far known; the latter is also of interest in that it adds yet another species to the closely interwoven group of Australian *Finlaya*.

My thanks are specially due to Dr. I. M. Mackerras, B.Sc., for his kind assistance in the determination of the latter species, since I was unable to do so myself, as the Institute does not possess a male specimen of *Aedes (Finlaya) occidentalis* (Skuse). The comparative notes on the genitalia are from his pen.

No figures are published with this paper. They will be given in a subsequent publication.

Culex (Culiciomyia) pullus (Theo.) is here recorded for the first time from the mainland of Australia, having been taken in some numbers in the Innisfail district, North Queensland. Its larva and pupa will be described in a subsequent paper.

***Mucidus chrysogaster*, sp. n.**

Head densely covered with golden narrow-curved and dark upright forked scales, the latter very numerous; a dense median row of sickle-shaped golden ones in the middle; the narrow-curved golden scales round the eyes are very prominent, extending out laterally; beneath is a small patch of black flat scales; remaining flat scales golden. Clypeus large, prominent, testaceous; palpi about one-quarter the length of the proboscis, densely covered with golden scales, except about the apical portion, which is clothed with black scales and numerous black hairs, elsewhere these being almost pale golden-brown, beneath the golden scales reaching almost to the apex; there are also a few outstanding black scales above and beneath on the first and second joint, giving the palps a shaggy appearance; proboscis covered with golden scales with irregular patches of black ones, labella large, reddish-brown, with short, pale hairs. Eyes blue-black; there are a few pale golden hairs overlying the eyes in the middle. Antennae with basal lobes pale testaceous, with a few small flat golden scales on their inner surface; second joint pale, considerably longer than the third; the latter to the apex brownish; pubescence pale, hairs of golden-brown. *Thorax*: scutum chocolate-coloured, covered with mixed golden and blackish-brown, narrow-curved scales; there is a moderately broad median transverse band of golden scales reaching right across the scutum, reaching thus but not quite to the sides; it is a broad (about a quarter the width of the scutum) stripe of golden scales, the golden scales are very pronounced on the anterior margin of the scutum; the scutum hairs are very dense above and in front of the wing-roots, reaching about one-third the distance to the prothoracic lobes, brownish-black above the wing-roots, black elsewhere; scutellum chocolate-brown, densely covered with pale sickle-shaped scales, posterior border bristles long, pale golden; prothoracic spiracles prominent, black, clothed with golden narrow-curved scales and numerous long golden hairs. *Wings*: metanotum chocolate-brown; pleurae blackish brown, with pale golden scales in the middle; halteres pale with dark knobs. *Abdomen*: first segment chocolate-brown covered with black flat scales, very hairy, the hairs blackish-brown on the apical margin, where they are pale golden, also a narrow, median, basal

patch of pale golden, loosely applied, flat scales; segments 2 to 4, inclusive, black-scaled with pale lemon-coloured basal banding, broadest on the second and diminishing in width to the fourth, where it is very narrow, each with two small, submedian, basal, golden spots and golden, median, lateral patches, largest on the fourth; third segment with a small subapical, golden spot toward the edge on either side; fourth flecked with scattered golden scales; segments 5 to the apex black-scaled, profusely mottled with golden scales; all segments with golden hairs on the apical margin; moderately numerous, pale golden hairs are to be seen on segments 5 to 7 inclusive; cerci reddish brown, large, clothed with numerous pale hairs; venter clothed with golden scales except the apex, which is dark-scaled. *Legs*: femora of fore legs black-scaled, heavily spotted with golden scales, with a basal golden band, knees golden; tibiae black-scaled, profusely spotted with golden scales, apex golden; first tarsal joint with basal golden banding, apex narrowly golden, remainder mottled black and golden; second to fourth joints black-scaled with moderately broad basal banding, fifth golden with a few scattered dark scales; femora, tibiae and tarsi of mid legs similar to those of the fore legs, except that the mottling is not so pronounced on the first tarsal joint and the fifth tarsals are entirely golden; femora and tibiae of hind legs similar to those of the fore and mid legs; first tarsals black-scaled, not mottled, with a basal golden band, second tarsal black with basal golden banding, third and fourth tarsals black with creamy-white basal banding, fifth tarsal creamy-white; ungues of all legs only slightly curved, equal, each with a small tooth. *Wings* with the base of the veins clothed with dense, black scales; all the cross-veins and the bases of the second and fifth longitudinal veins with dusky clouding, which extends into the cell for some distance immediately above the base of the third long vein (R_{4+5}); the costal, sub-costal and the anterior portion of the cell C_{1+2} are distinctly yellow. The scale structure of the veins is peculiar, as there are no lateral vein scales present except toward the apices of R_1 , R_2 , R_3 , R_{4+5} , M_1 and M_2 , moreover the median scales of the veins are distinctly small. The two specimens before me show the same peculiarity in this connection.

Length: 9 mm., not including the proboscis.

NORTH QUEENSLAND: Berner Creek, near Innistail.

This is a very distinct species and markedly different from its congener, *M. alternans* (Westw.). It is the most striking Australian mosquito and ranks with the blue and golden *Megarhinus speciosus* Skuse, for beauty. It was found by myself while working over a shallow rock pool about nine feet by six feet in extent and nine inches deep, containing a large quantity of decaying vegetable matter and a large log of wood, on the side of Berner Creek; the pool was in the shade of an overhanging tree from noon till sunset. Two pupae were secured on the occasion of my first visit to this pool, and notwithstanding minute and careful searches on several succeeding days no further specimens were found. A single larva was also found, which almost certainly belongs to this species on account of its large size. It is not the larval skin of *Lutzia halifaxi* (Theo.), the larvae and pupae of which were also taken in some numbers in this pool.

Type and paratype in the Institute Collection.

***Aedes* (Finlaya) mackerrasi, sp. n.**

♂. *Head* covered with pale narrow-curved and black upright forked scales, vertex with yellowish upright forked ones in addition, sides covered with pale flat scales, bristles bordering the eyes black. *Antennae* with dusky plumes; last two joints brownish, clothed with fairly dense short pale hairs; nodal hairs dusky, nearly the length of the apical segment. *Palpi* clothed with deep black scales, second segment with a fairly broad median white-scaled band, penultimate and apical segments with white basal banding and clothed with dusky hairs, very dense on the

penultimate and the tip of the apical segment; proboscis black, slender. Eyes black. *Thorax* reddish brown, densely clothed with pale golden narrow-curved scales, bristles pale except above the wing-roots, where they are dusky; scutellum similar to thorax, except the posterior margin, which is dusky, posterior border bristles yellowish brown; prothoracic lobes with pale narrow-curved scales and numerous dark bristles; metanotum brown; pleurae brown with patches of creamy-white, flat scales, bristles pale golden-yellow. *Wings* with a distinct violet tint, slightly longer than the abdomen, veins clothed with black scales with violet reflections; base of the second fork-cell considerably nearer the base of the wing than that of the first fork-cell, the latter longer and narrower than the former; anterior basal cross-vein shorter than the anterior and about twice its length from it. Halteres pale brown, clothed with small, pale, flat scales; knobs pale. *Legs* black with a violet iridescence; fore and mid femora white scaled beneath, except for a narrow area of black scale apically, tibiae pale orange yellow, tibiae with short golden yellow bristles, also the femora, first tarsal joint slightly more than half the length of the tibiae, first and second tarsal with white basal banding, remaining joints unbanded; tarsal joints 4 to 3 of hind legs basally banded with white, fourth with rudimentary white basal banding, fifth unbanded; unguis of fore and mid legs unequal, the larger with a tooth, hind unguis equal and simple. *Abdomen* clothed with violet-tinted black scales and dense lateral pale hairs; segments 2 to 6 with white basal banding; 7th with large white lateral patches extending to the dorsum but not meeting in the middle; 8th with narrow white basal banding. Side-pieces black-scaled and covered with long dense, pale hairs; appendage of claspette large and expanded in side view. Venter black-scaled, with white basal banding.

♀. Palpi black with violet iridescence, about one-seventh the length of the proboscis; latter as in ♂. Legs as in ♂; unguis all equal and uniserrate. Wings with the scales denser than in the ♂, base of second fork-cell nearer the base of the wing than that of the first, the former slightly wider; anterior basal cross-vein shorter than the anterior cross-vein and a little more than its own distance from the latter. Abdomen black, unbanded; the segments with lateral, basal, triangular spots.

Length: 4.5 to 5.0 mm., excluding the proboscis.

NOCCI QUEENSLAND: Innisfail district (*F. H. Taylor*).

Described from a series of both sexes, bred from pupae, found in a small pool of water, about half a litre, overgrown with coarse grass above a waterfall on Berner Creek.

This species is very close to *Aedes (Finlaya) occidentalis* (Skuse), but may be distinguished by the absence of speckling with white scales on the femora and by the rudimentary white band on the fourth hind tarsal joint; also by the large and expanded appendage of the claspette, whereas in *A. (Finlaya) occidentalis* (Skuse) it is narrow and almost uniformly tapering.

It affords me much pleasure to dedicate this species to my friend Dr. I. M. Mackerras, B.Sc.

Type ♂, allotype ♀, and a series of paratypes in the Institute Collection.